

CLAIMS

1. A belt type continuously variable transmission provided with two pulley shafts arranged in parallel a predetermined distance apart from each other, a movable sheave on each pulley shaft, the movable sheaves being able to slide in an axial direction on the pulley shafts, a fixed sheave arranged on each pulley shaft so as to face the moveable sheave on each pulley shaft, the fixed sheave and the movable sheave that face each another on each pulley shaft together forming a groove therebetween, and a belt wound around the grooves between the movable sheaves and the fixed sheaves that face one another, characterised in that

at least one of the movable sheaves and a motor serving as a driving source for the moving sheave are integrally provided.

2. The belt type continuously variable transmission according to claim 1, further comprising an integral rotating mechanism which rotates the motor integrally with the movable sheave, and a relative moving mechanism that moves the motor and the sheave relative to one another in the axial direction.

3. The belt type continuously variable transmission according to claim 1 or claim 2, wherein a moving direction converting mechanism that converts force in the direction of rotation, which is driving force from the motor, into force in the axial direction is provided between the motor and the movable sheave and directly on the motor and the movable sheave.

4. The belt type continuously variable transmission according to claim 3, wherein the moving direction converting mechanism includes a moving screw portion.

5. The belt type continuously variable transmission according to claim 1 or claim 2, wherein the motor is provided with an inner rotor which is integrated with the pulley shaft and an outer rotor which generates driving force by rotating relative to the

inner rotor; the pulley shaft is provided with a bearing that rotates the outer rotor relative to the pulley shaft; and a moving direction converting mechanism that converts force in the direction of rotation of the outer rotor to force in the axial direction is provided between the outer rotor and the movable sheave.

6. The belt type continuously variable transmission according to claim 5, wherein the moving direction converting mechanism includes a spline portion provided between the outer rotor and the movable sheave.

7. The belt type continuously variable transmission according to any one of claims 1 to 6, wherein a hydraulic pressure chamber which pushes the movable sheave toward the fixed sheave using hydraulic pressure is provided in serial with the motor in the axial direction.

8. The belt type continuously variable transmission according to claim 7, wherein at least one wall surface that forms the hydraulic pressure chamber is formed by the motor.

9. The belt type continuously variable transmission according to claim 8, wherein the motor is a hydraulic motor and an oil chamber in the motor and the hydraulic pressure chamber are arranged facing one another in the axial direction across the wall surface formed by the motor.

10. The belt type continuously variable transmission according to claim 9, wherein the oil chamber in the motor and the hydraulic pressure chamber are connected to each other.

11. The belt type continuously variable transmission according to any one of claims 1 to 10, wherein one of the pulley shafts is a primary side pulley shaft and the

other of the pulley shafts is a secondary side pulley shaft, the movable sheave provided integrally with the motor is arranged on the primary side pulley shaft, and a plurality of pushing mechanisms that push the movable sheave toward the fixed sheave are provided on the movable sheave on the secondary side pulley shaft.

12. The belt type continuously variable transmission according to claim 11, wherein at least one of the pushing mechanisms is a torque cam.

13. The belt type continuously variable transmission according to claim 12, wherein an absorbing mechanism that makes the torque cam operate smoothly is provided on the fixed sheave on the secondary side pulley shaft or the movable sheave on the secondary side pulley shaft.

14. The belt type continuously variable transmission according to claim 13, wherein a structure which changes the degree of absorption according to the speed ratio is provided in the absorbing mechanism.

15. A belt type continuously variable transmission, comprising
two pulley shafts arranged in parallel a predetermined distance apart from each other;

a movable sheave on each pulley shaft, the movable sheaves being able to slide in an axial direction on the pulley shafts;

a fixed sheave arranged on each pulley shaft so as to face the moveable sheave on each pulley shaft, the fixed sheave and the movable sheave that face each another on each pulley shaft together forming a groove therebetween;

a belt wound around the grooves between the movable sheaves and the fixed sheaves that face one another; and

a motor integrally provided to at least one of the movable sheaves and capable of driving said movable sheave.